REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

Claims 2 and 15 are currently being canceled.

Claims 1, 3, 4, 10, 14, 16, 17, 19, 20 and 21 are currently being amended. Please note that the features of now-canceled claim 2 have been incorporated into its base claim 1, and the features of now-canceled claim 15 have been incorporated into its base claim 14. Claims 3 and 4 have been amended due to the cancellation of claim 2 and the incorporation of the features of claim 2 into claim 1.

No claims are currently being added.

This amendment amends and cancels claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1, 3-14 and 16-22 are now pending in this application.

Request for Entry of After-Final Amendment and Reply:

It is respectfully requested that this after-final amendment and reply be considered and entered, since: a) it is believed to place this application in condition for allowance without requiring additional search and/or consideration, and b) it is believed to lessen the number of potential issues for appeal.

Claim Rejections:

In the Office Action, claims 1, 2, 4, 10, 13, 14, 15, 16, 17, 19 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,351,465 to Han in view of U.S. Patent No. 5,996,021 to Civanlar et al.; and claims 3, 5, 6, 7, 8, 9, 11, 12, 18, 21 and 22 were rejected under 35

U.S.C. § 103(a) as being unpatentable over Han in view of Civanlar et al. and further in view of U.S. Patent No. 6,185,213 to Katsube et al. These rejections are traversed for at least the reasons given below.

The Office Action asserts that Han discloses the selecting of one router among a plurality of routers. However, Applicants submit that Han fails to disclose the claimed selecting step for selecting one router according to a number of already set up cut-through paths such that numbers of cut-through paths at a plurality of routers are uniformly distributed among the plurality of routers which can possibly be a next hop router. Also, Han and Civanlar et al. fall to disclose or suggest already set up cut-through paths that are used to route packets to a same destination node.

The claimed invention is directed to a router device and a cut-through path control method capable of carrying out load balancing at an intermediate router device. In order to achieve the claimed router device and method, the number of already set up cut-through paths is used in the judgment to obtain the next hop information. In the case where there are two next hop information as in the network configuration of Figure 1, the next hop information is determined by an algorithm which selects the router device 102 when the number of already set up cut-through paths is zero or even, or the router device 103 when the number of already set up cut-through paths is odd (step 308), for example. Also, the next hop router device selection algorithm is not limited to this, and any algorithm can be used as long as it sets an identical (or nearly identical) number of paths to each next hop router device or it distributes paths uniformly among the next hop router devices (see page 12 line 31 - page 13 line 4, page 13 lines 10-14 of the specification, and Figure 3 of the drawings).

On the other hand, Han merely focuses on an improved system for allowing IP traffic to cut-through ATM switches. In Han's system, after four cut-through paths (XI, X2, Y3, Y4) have been established, the default paths only carry traffic that terminates at or originates from the ATM router (50). As an ATM switch, the ATM router (50) maintains the cell counts of a path and can monitor the traffic on Xij. For the traffic on the cut-through paths, the ATM

network performs up to the ATM (layer 2) functionality. But for the default paths, the ATM router performs up to the network layer 3 routing function (see col. 6 lines 30-55 and Figure 5 of Han). Han actually fails to suggest or teach any specific load balancing. Also, although Civanlar et al. describes load balancing, it fails to suggest or teach any specific load balancing.

In comparison with Han and Civanlar et al. and Katsube, presently pending independent claim 1 is directed to a specific load balancing, in particular the selecting step selecting one router according to a number of already set up cut-through paths that are used to route packets to a same destination node, such that numbers of cut-through paths at a plurality of routers are uniformly distributed among said plurality of routers which can possibly be a next hop router, so that it becomes possible to carry out the load balancing at an intermediate router device. The same features also hold for presently pending independent claim 14 and 19.

The same argument also holds for a changing step changing the route of one cut-through path according to a number of already set up cut-through paths that are used to route packets to a same destination node such that numbers of cut-through paths at a plurality of routers are uniformly distributed among said plurality of routers which can possibly be a next hop router. This feature is recited in presently pending independent claims 10, 17 and 20.

Since neither Civinlar nor Katsube rectifies the above-mentioned deficiencies of Han, all of the presently pending claims are allowable over the cited art of record.

Accordingly, Applicants submit that the rejection of each of the presently pending independent claims under 35 U.S.C. § 103(a) is incorrect for at least the reasons given above. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections made in the Office Action.

Conclusion:

Since there are no other objections or rejections raised in the Office Action that have not been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date November 2, 2004

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